

CLAIMS

1. A vehicle seat, comprising:
a seat frame;
5 a spring assembly supported by said seat frame; and
an upholstery assembly covering at least part of said seat frame and spring
assembly;
said spring assembly including a central support member adapted to support at
least most of a load of a vehicle occupant seated in said seat, a plurality of spring
10 members supporting said central support member relative to said seat frame, and a
plurality of displacement sensors each for detecting a displacement of a selected point
of said central support member relative to said seat frame.
2. A vehicle seat according to claim 1, wherein said selected points include
15 peripheral points of said central support member.
3. A vehicle seat according to claim 1, further comprising a control unit for
producing a control output according to outputs from said sensors, said control unit
being incorporated with a CPU programmed so as to identify a load distribution on said
20 central support member.
4. A vehicle seat according to claim 3, wherein said load distribution includes a
distribution in a fore-and-aft direction.
- 25 5. A vehicle seat according to claim 3, wherein said load distribution includes a

distribution in a lateral direction.

6. A vehicle seat according to claim 3, wherein said CPU is programmed so as to evaluate a sum of the outputs of said sensors.

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7. A vehicle seat according to claim 6, wherein said CPU is programmed so as to compare the sum of the outputs of said sensors with a threshold value for identifying the identity of a vehicle occupant.

10 8. A vehicle seat according to claim 1, wherein said central support member includes a grid or mesh formed by a substantially straight wire member.

9. A vehicle seat according to claim 1, wherein said central support member includes a grid or mesh formed by a wavy wire member.

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10. A vehicle seat according to claim 1, wherein said central support member includes a grid or mesh formed by a combination of a substantially straight wire member and a wavy wire member.

20 11. A vehicle seat according to claim 1, wherein said spring members comprise tension coil springs.

12. A vehicle seat according to claim 1, wherein each of said displacement sensors is incorporated in a corresponding one of said spring members.

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13. A vehicle seat according to claim 1, wherein each of said displacement sensors comprises a sensor main body attached to said seat frame, a spring loaded pulley rotatably supported by said sensor main body, a string wound around said pulley and having one end attached to said central support member, and an angular sensor
5 incorporated in said sensor main body for detecting a rotational angle of said pulley.

14. A vehicle seat according to claim 13, wherein a pivot center of said pulley is located above a level of said central support member under an unloaded condition of said seat.

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15. A vehicle seat according to claim 1, further comprising a sub frame attached to said seat frame and having said spring assembly incorporated therein.

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